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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

JONES, et al.

Serial No.: 09/828,276

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Atty. Docket No.: 00-721-US



ADENOSINE CYCLIC KETALS:
NOVEL ADENOSINE ANALOGUES
FOR PHARMACOTHERAPY

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Commissioner for Patents
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SUBMISSION OF FORMAL DRAWINGS

Dear Sir:

Submitted herewith are sheets of formal drawings, Figures 1-6B, Sheets 1-7, for filing in connection with the above-identified application. Each sheet of drawing has the identifying indicia suggested in 37 CFR §1.84(c) on the reverse side of the drawing.

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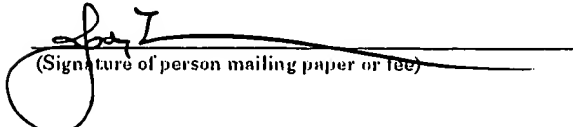
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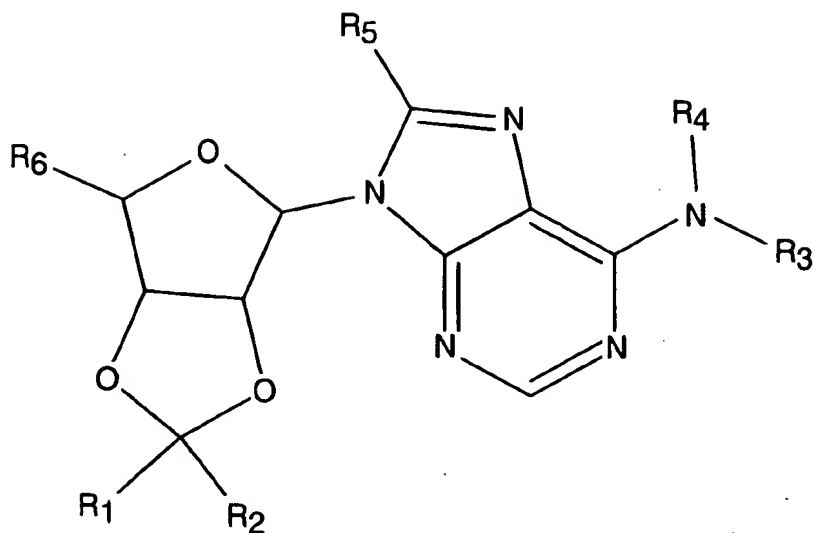
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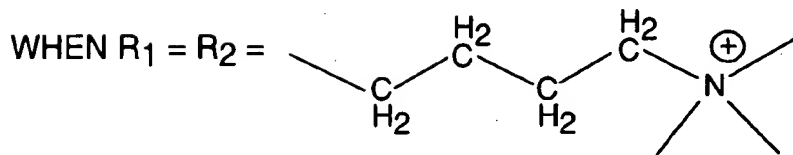

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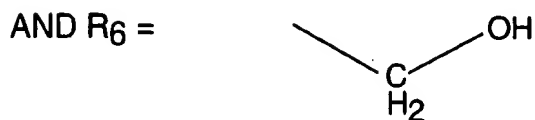
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ADENOSINE CYCLIC KETAL (ACK)



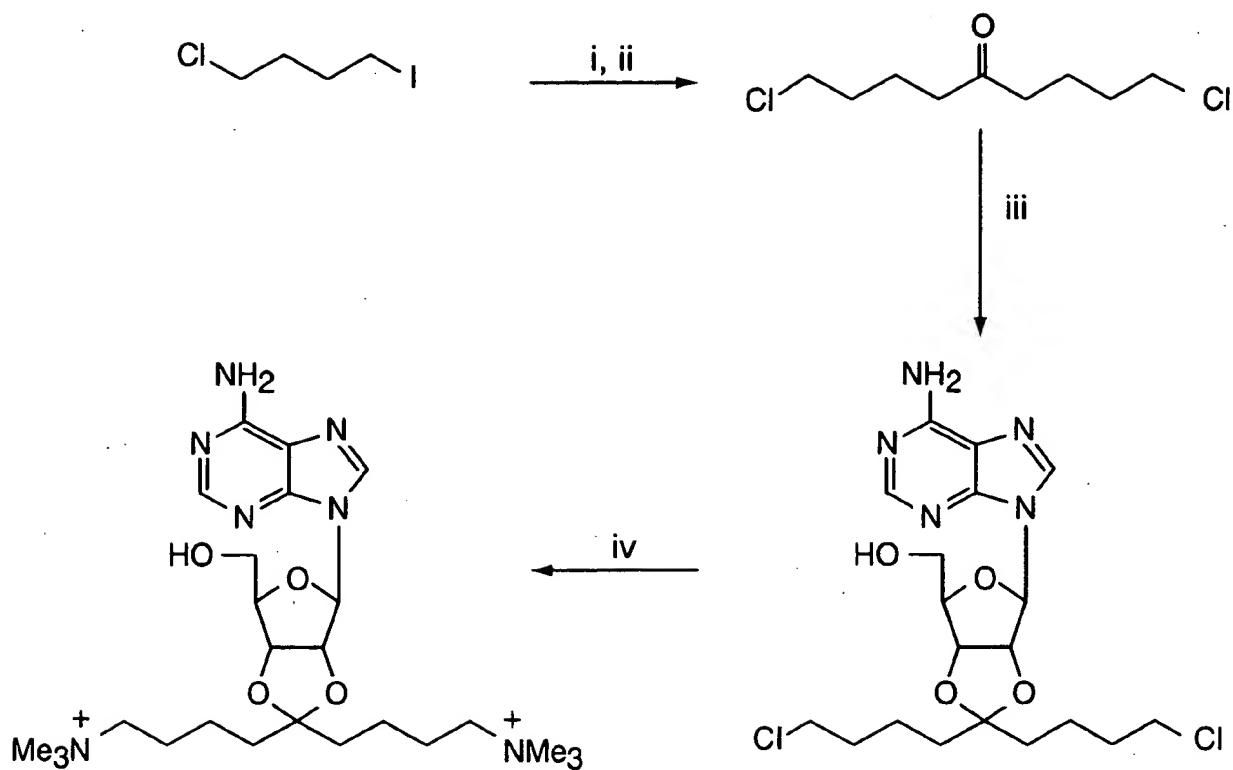
AND R_3, R_4 AND $R_5 =$ HYDROGEN



CHEMICAL STRUCTURE OF ADENOSINE CYCLIC KETAL (ACK) AND THE
 CHEMICAL FORMULA OF THE COMPOUND NONAMETHONIUM
 ADENOSINE CYCLIC KETAL (NONAMETHONIUM ACK).

FIG. 1A

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The synthetic scheme for synthesizing nonamethonium adenosine cyclic ketal.

The reagents and conditions are: i) zinc dust, tetrahydrofuran (THF);

ii) N-methylpyrrolidine, CoBr_2 , carbon monoxide;

iii) adenosine, HCl/dioxane, $(\text{EtO})_3\text{CH}$, DMF; iv) 40% Me_3N in H_2O .

FIG. 1B

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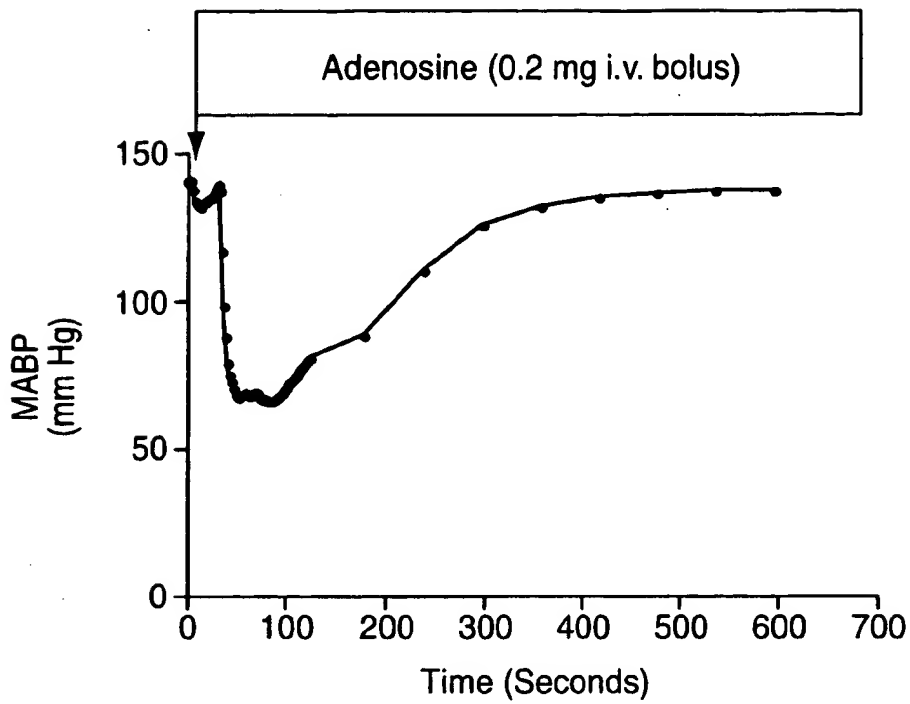


FIG. 2A

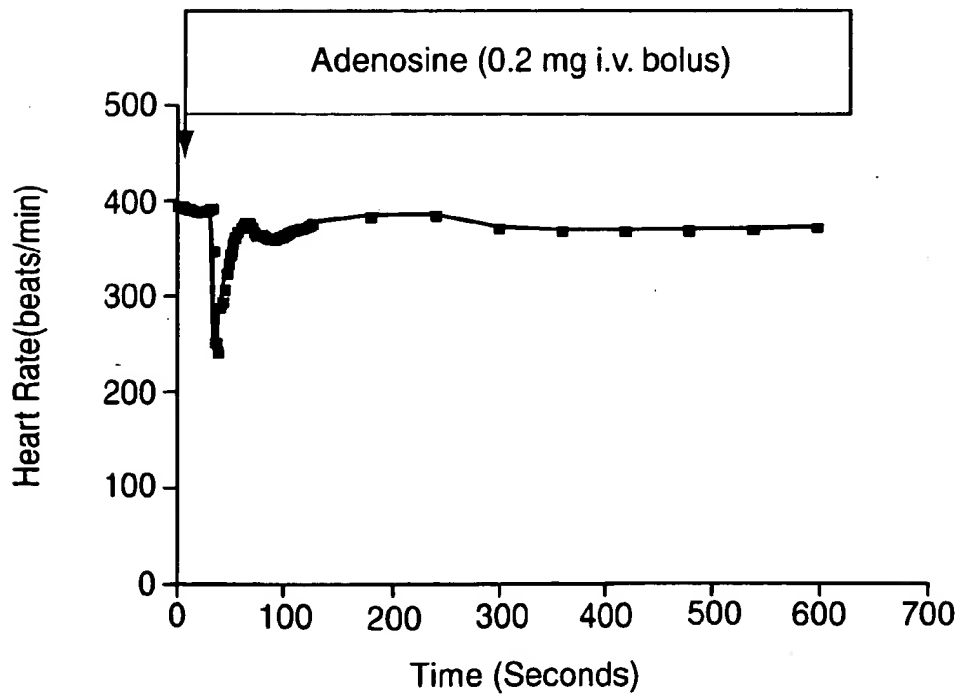


FIG. 2B

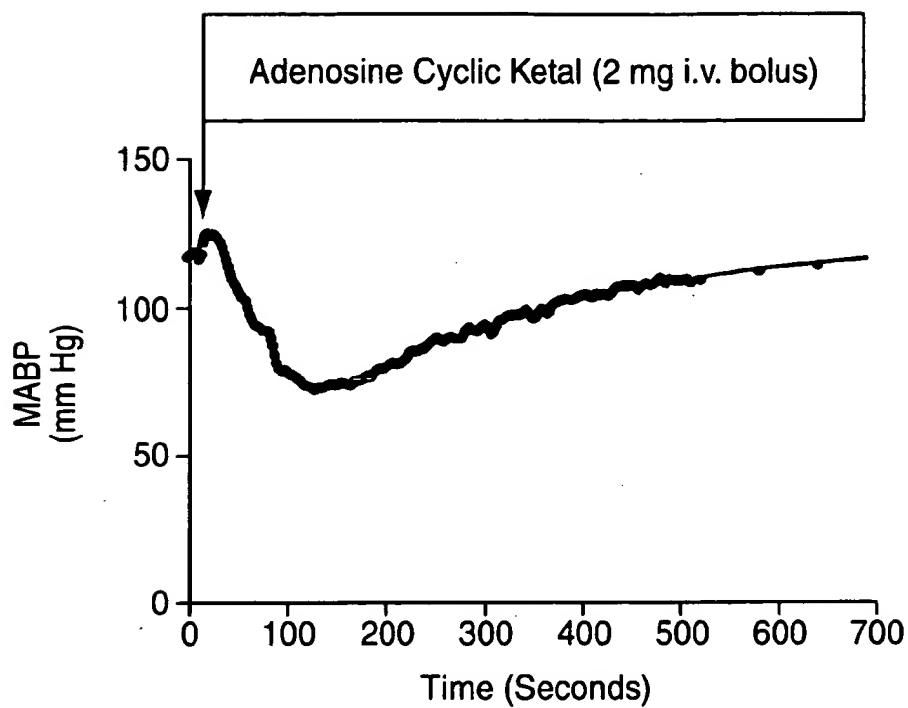


FIG. 3A

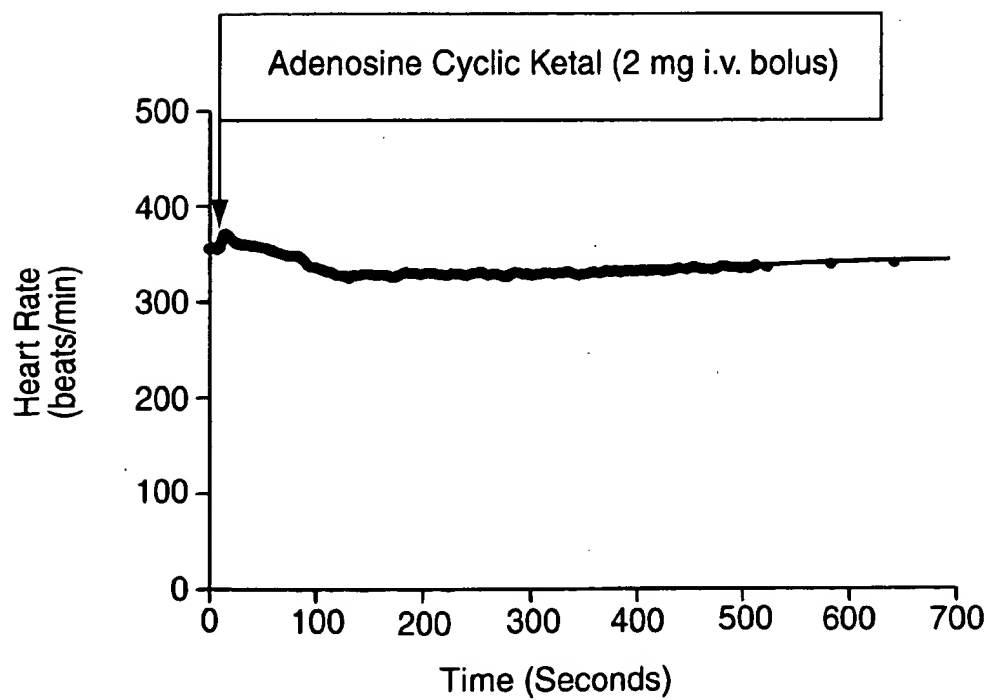


FIG. 3B

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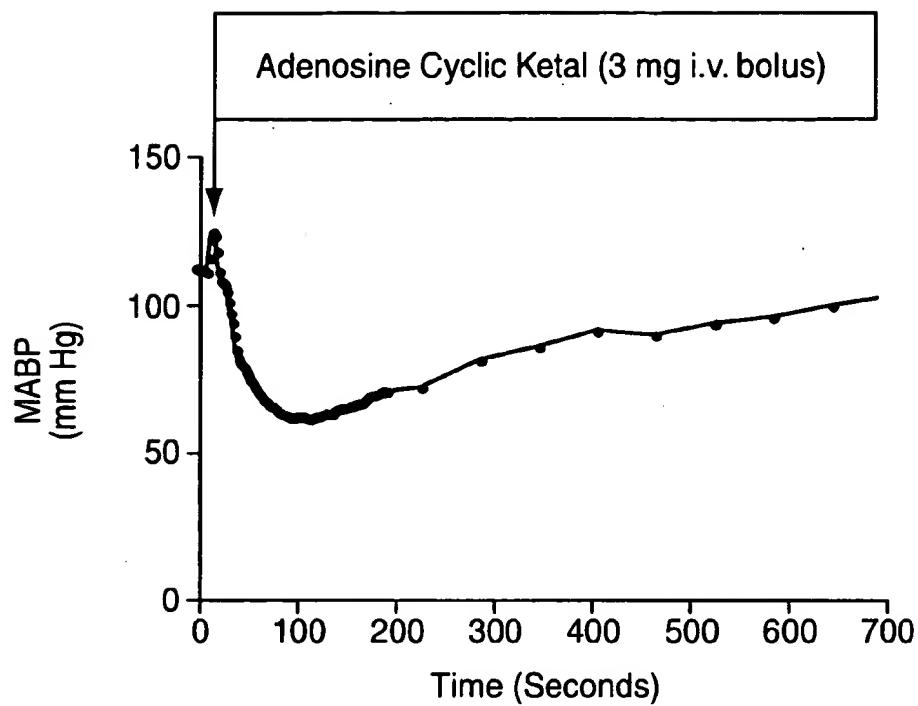


FIG. 4A

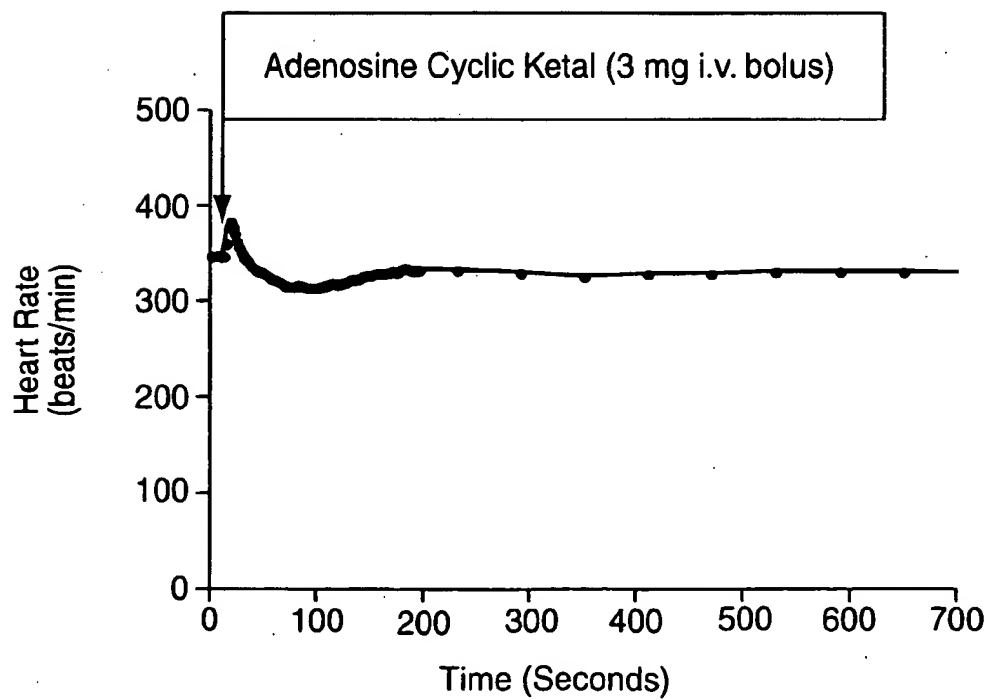


FIG. 4B

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Pretreated with DPSPX (10 mg i.v. bolus + 0.15 mg/min)

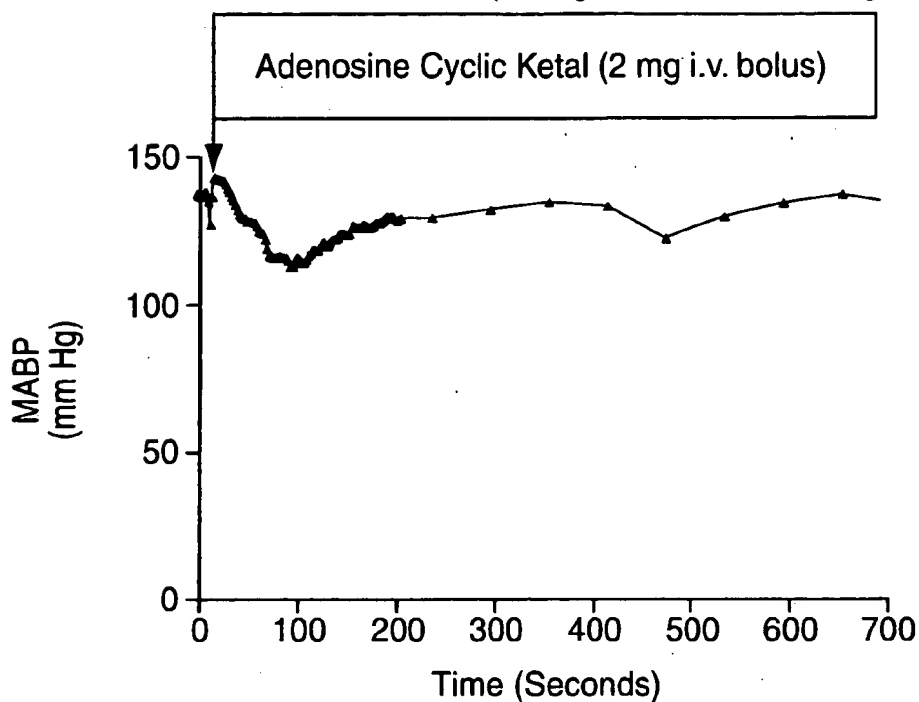


FIG. 5A

Pretreated with DPSPX (10 mg i.v. bolus + 0.15 mg/min)

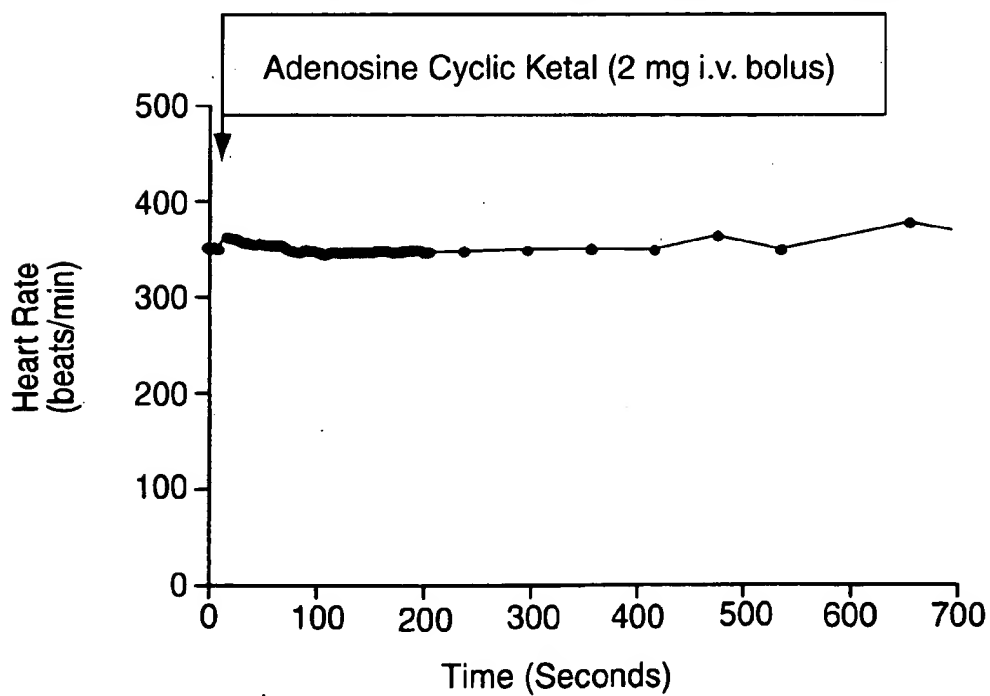


FIG. 5B

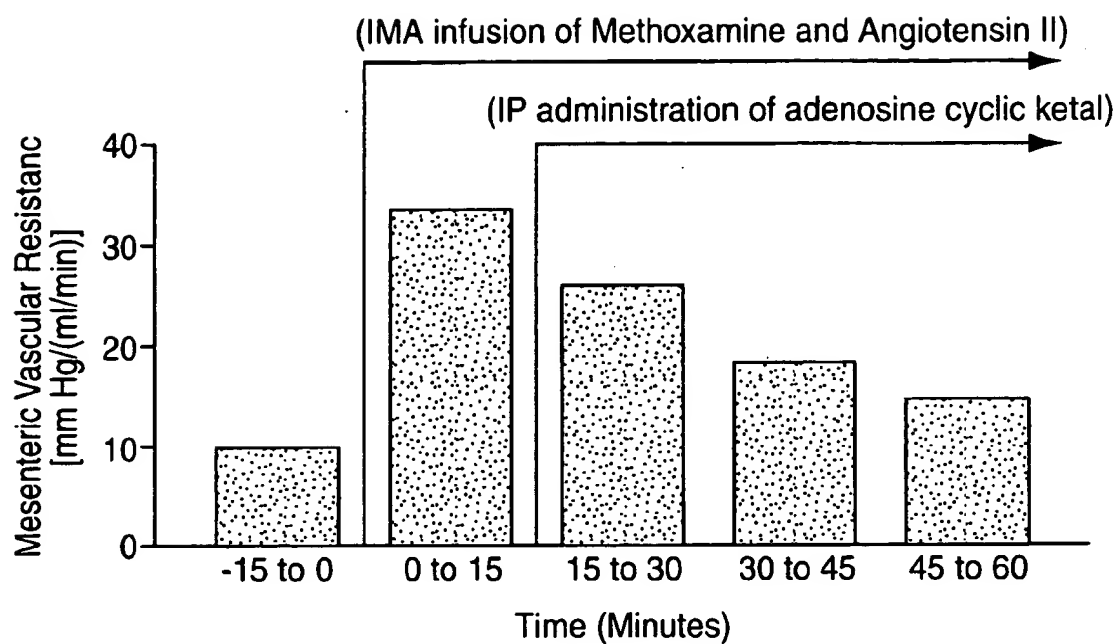


FIG. 6A

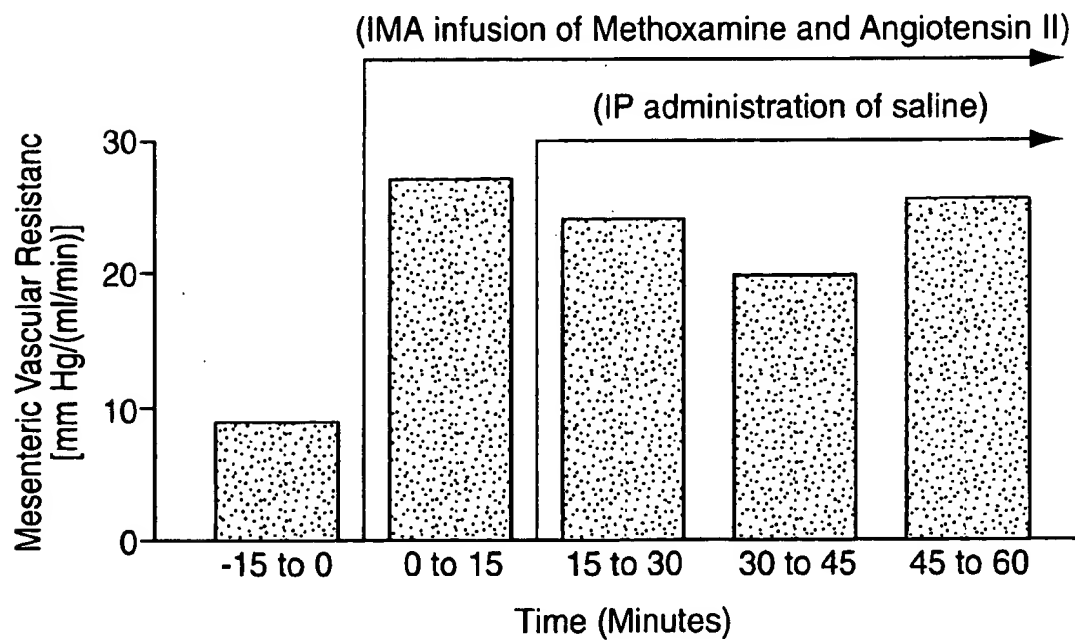


FIG. 6B